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PARALYSIS IN INFANTS.

By S. G. WEBBER, M.D.

Read before the Boston Society for Medical Observation.

(Concluded from page 342.)

THE symptoms which are most important in assisting to form an early diagnosis in caries of the vertebræ are, disturbance of sensation, some anæsthesia; pain referred to the periphery; feelings of irritation, as itching, tingling, smarting, &c., in the side or in front, sometimes leading to constant scratching. Motor disturbance coming on gradually, the paralysis is rarely, if ever, sudden in its onset; there are generally no convulsions, though there may be startings and twitching of the limbs, especially during sleep. Electro-muscular contractility is retained; atrophy and contractions generally set in only after the disease has existed for a long time, and when the diagnosis is clear.

Several cases of infantile paralysis have been carefully examined after death, and disease of the cord has been recognized. In most of these, the patient lived many years after the beginning of the paralysis. From this fact it might be doubted whether the changes found were the cause or the effect of the loss of motion.

In infantile paralysis, cerebral symptoms are wanting, as a rule; motion alone is affected. For such a result the lesion must be either peripheral in the muscles, or in the endings of the nerves, or in the anterior roots or in the motor portion of the cord or brain. The brain is excluded by all absence of cerebral symptoms. The generalization of the paralysis and the suddenness of the attack in the beginning would also exclude the peripheral origin and its origin in the anterior roots. The motor portions of the cord are the only parts, then, in which the lesion can be seated, i. e., the anterior cornua, the anterior and lateral columns. As the faradaic contractility of the muscles is soon lost, the lesion must be near the level at which the nerves supplying those muscles enter the cord. As there is early atrophy, said by most observers to be due to fatty degeneration of the muscular fibres, the central grey substance must be the part affected, and the central portion of the anterior cornua is probably the exact spot of the lesion.

VOL. LXXXVIII. No. 15

In those cases which have been examined after death, the anterior cornua have been found more or less changed, there being a destruction of the nerve cells and atrophy, with an increase of the fibrous network in old cases. When the patient has lived many years after the attack occurred, it is not possible from the nature of the changes found to decide in regard to the nature of the lesion at the beginning.

In an article by Charcot and Joffroy (*Arch. de Physiol. Norm. et Path.*, 1870), the lesion is supposed to be in the nerve cells of the anterior cornua. Perhaps I ought to quote the opinion, as expressed by them.

"But what are the elements in the anterior cornua which are first attacked? Is it the neuroglia or the motor cells? The second hypothesis seems to us the more likely. Wherefore, indeed, this remarkable localization of the anterior cornua if the neuroglia is first affected? Is it not more probable that the motor nerve cells, special organs, endowed with specific properties, have been the first seat of the disease? One fact, also, may be mentioned in support of this view; in certain regions of the cord the disappearance of a certain number, of an entire group, or even several groups of these cells is, with the consequent atrophy of the anterior roots, the only alteration which can be discovered histologically."

We know very little in regard to the nature of the nerve cells of the cord, or about the diseases to which they may be exposed. And, while it may be possible that the cells throughout a certain length of the cord should be so affected as to cause sudden paralysis, a portion of the cells afterwards to be restored to health, and the rest to be totally destroyed, yet I am not inclined to admit this view.

A congestion of a large part of the cord might produce a paralysis corresponding to the extent of the cord affected. As this was relieved, the paralysis would disappear. Any portion of the cord more seriously affected would show the effects of the disturbance longer, and if the nerve cells of any part should be destroyed, the paralysis would be permanent.

On comparing the cord of an infant with that of an adult, the larger number of nuclear and cellular elements in the former will lead to the conclusion that a congestion which would pass away and leave no permanent effects in an adult, might easily cause an amount of change in an infant's cord from which recovery would be impossible.

I would, then, refer the earlier symptoms to congestion, possibly to a hæmorrhage in some cases. Perhaps, in the first case reported, a slight hæmorrhage was the cause of the child's screaming at night. Dr. Hammond has seen one case where, at the autopsy, was found a cicatrix partially filled with a very small clot. (*Diseases of the Nervous System*, p. 692.)

A case reported by Parrot and Joffroy (*Archives de Physiologie Normale et Path.*, 1870, p. 309) is confirmatory of the view here taken,

though the authors do not so consider it. The child died, at the age of three years, from measles. The arteries of the grey matter had undergone an inflammatory change, and in the lymphatic sheaths were crystals of hæmatoidine and masses of nuclear elements of new formation. These changes were not limited to the parts from which the nerve cells had disappeared, nor were they found in all points where that change had occurred. For these reasons the authors do not consider them primary, but think the destruction of the nerve cells was primary.

The changes in the bloodvessels were such as required time, and were probably secondary, as was also the destruction of the nerve cells. This case would rather tend to prove that both these lesions are due to a congestion, and, possibly, a slight inflammation of the grey substance, by which the vessels and the nerve cells were affected, though not equally so. The relief of the congestion allows those cells which are not seriously injured to recover their function, and motor power is partially regained; other cells are too severely affected to recover, and, in the muscles in relation with such, the paralysis becomes permanent.*

In the second class of cases, the symptoms point especially to a cerebral origin; the convulsions, the loss of consciousness, the subsequent hemiplegia, which in the fourth case affected the face as well as the arm and leg, the contractions, which occurred in two out of three cases, and the epileptic attacks, which were subsequently developed in all three cases—these point to a cerebral origin.

Of the nature of the lesion, there may well be differences of opinion. Dr. Hammond gives a good description of the affection, and refers such cases to diffused cerebral sclerosis. This may be the lesion found years after the beginning of the affection. I have examined one brain where the changes were of that description, and, from the imperfect account of the symptoms received, should refer the case to this class.†

Meigs and Pepper mention a case almost exactly like one of the above, and consider the symptoms due to cerebral hæmorrhage. I am rather more inclined to consider the lesion meningeal, congestive, or inflammatory. If there is ever hæmorrhage, it must be very slight. The changes in the cerebral substance would be secondary, and when the immature nature of an infant's brain is considered, the more serious results of irritation and congestion are easily explained, as in the spinal cord. This is in harmony with the fact that apparently serious lesions of healthy infants' brains are repaired, which, in adults, might leave lasting defects. In one case, a continuance of the disturbing cause interferes with the natural development of the nu-

* Since this was written, I have seen a brief summary of conclusions reached by Damaschino from the examination of three cases. He considers the paralysis due to a lesion of the cord, affecting the anterior portion, and of a hyperæmic and inflammatory nature.—(*All. Med. Cent. Zeit.*, 1872, 93.)

† T. Simon reports a case of convulsions, at 2 years of age, followed by epilepsy, in which sclerosis of the brain was found after death.—(*Berl. Klin. Wochens.*, 1873, 4 & 5.)

clear elements. In the other, the fact that the elements are not yet fully formed, favors the restoration from temporary and fugitive disturbances. The long continuance of the convulsions, in one case increasing in intensity until consciousness was lost, this occurring after a hot day, would favor the supposition that the lesion is congestion rather than hæmorrhage.

West, in his admirable little book on the *Disorders of the Nervous System in Childhood*, has, perhaps, referred to such cases where epilepsy occurs years after attacks of convulsions followed by paralysis.

The lesions found in paralysis due to caries of vertebræ are, thickening of the spinal dura mater, causing compression of the nerves, spinal meningitis or myelitis. These may exist independently of any curvature of the spinal column. There may also be sclerosis of the white columns as a secondary change.

One word in regard to diagnosis. For infantile paralysis may be mistaken the paralysis found in idiocy, reflex paralysis due to constipation or other causes, and so-called rheumatic paralysis, from the action of cold on a circumscribed part of the body; also, the paralysis which sometimes follows as a sequel of acute febrile diseases or diphtheria. The paralysis which occurs in hydrocephalus is less likely to be mistaken.

I ought, perhaps, to say a few words in regard to prognosis and treatment. Briefly, then:—infantile paralysis, neglected or improperly treated, ends in entire loss of power and atrophy of one or more muscles, with subsequent deformity. The faradaic current is not able to restore function. Even while it is used, the muscles may lose their power of responding to its stimulus. The interrupted galvanic current is the best treatment; but to be of use it must be employed early. Wait to see how much improvement will be gained by nature, and the precious opportunity slips by, and it is too late to do much. Use electricity early, and much may be done. Injection of a concentrated solution of strychnia into the affected muscles has been found of great benefit. (See *Lancet*, July 6, 1872.)

In paralysis of cerebral origin, the prognosis is less favorable. If the lesion is so severe that nature cannot restore function, only a little can be gained in addition by faradizing the paralyzed muscles. When contraction has occurred, the galvanic current may cause relaxation; but it is questionable, in my mind, whether any permanent benefit can be obtained.

In caries of the vertebræ, it is necessary to keep the diseased bone immovable until the disease is cured. The apparatus described by Dr. Tarbell, in his paper lately read before this Society, seems well adapted for this purpose. If there is any paralysis remaining, it may be treated by electricity.

LABOR COMPLICATED BY VARIX OF THE VULVA, AND BY UNUSUAL SIZE OF THE CHILD.

By CHALES W. PARSONS, M.D., Providence, R. I.

THE wife of a machinist, born in England, had had, previously, two living children, and one miscarriage. She was rather a tall and slender woman, much troubled with varicose veins in the legs, and, during pregnancy, in the vulva also, aggravated by her unavoidable household cares. She missed her menstrual period on May 29th, 1872, and it proved that she was pregnant. During her pregnancy, the varices became larger than ever before, the right labium being occupied by a large one covered by skin, and another hanging, to use her own expression, "like a bunch of grapes," near the urethra, and covered by mucous membrane.

On the morning of February 12th, I was called to her. She had been quite weak for some time, had not been able keep up and do her work, and the varices of the vulva were smaller. She had slept till near four in the morning. At six, the pains were rather severe, not more than five or ten minutes between; the waters had escaped about fifteen minutes before. On examination, the os uteri was found completely dilated; head above upper strait; posterior fontanelle to the left side. The vulva was tumid with varices. Between eight and nine, finding the head did not engage itself in the pelvis, I prepared to apply forceps. On passing a silver catheter, it caused a very free flow of blood through and alongside of the instrument, and did not enter the bladder. Between nine and ten, I applied the forceps, without having evacuated the bladder, as it is my rule to do. She had passed water about three hours before. By hard traction, aided by strong pains, the head was brought down into the pelvis, being felt to slip by the upper strait; when it came to press on the perineum during pains, the instrument was removed. On the vaginal walls, round blue varices were seen; one was in shape and size like the small end of a hen's egg. At first pushed down before the head, they were flattened as it passed. The top of the head passed the perineum, without unusual delay, about a quarter of eleven. The head was then found to be extraordinarily large; after the whole top had emerged, the forehead was several minutes distending the perineum; the cheeks were very full and dusky blue; no pulsation at the fontanelle. After the head was delivered, and funis found not to be around the neck, several pains, and I should think fifteen minutes elapsed, before the shoulders were delivered. The reason for this will appear hereafter. After several efforts, I got a tape under the left armpit, which aided in delivering that arm. After the shoulders, the hips were also delayed in passing. The perineum was distensible, and escaped laceration. No pulsation was felt in the funis, nor at the heart, nor was there a single gasp. Means of resuscitation failed.

The child was a male. It weighed, by steelyards warranted accurate, and which weighs down to single ounces, seventeen pounds and two ounces with the clothes on. These were only a short flannel shirt, binder and slip; it was weighed in a light calico apron. The child measured in length a fraction of an inch over two feet; width, from the point of one shoulder to that of the other, in front, eight inches; circumference of head, around forehead and vertex, sixteen inches.

That night the mother had a good deal of restlessness and fever; pulse 108 to 116; abdomen much distended and painful; with moderate after-pains. She passed water several times the next day, mixed with blood. Toward evening of the next day (Feb. 13th), she was more comfortable, moved easier, turned on her back, but the abdomen was still much distended and tender on pressure. No nausea. She was treated with opiates, sinapisms, liquid food.

Feb. 14th, 9, A.M.—Has had a good night; slept much, taking but one Dover's powder; abdomen less tender, still distended. Pulse 108. Has relished toast and coffee. 3, P.M.—Feels better; pulse 120.

From that time she steadily improved, except that, from February 16th, for a few days there was a distention of the breasts, and the pulse, on the 16th and 17th, ran up to 120, having been 100 on the 15th. She ate beefsteak on the 17th, and the following day had the bowels moved by castor oil.

Eleven days after the birth, she walked about the room. The varices have mostly disappeared.

COURAGEOUS AND SERVICEABLE SCEPTICISM.—Prof. E. S. Dunster, M.D., in his annual address before the New York Academy of Medicine, Dec. 30, 1872, says: "The diminishing belief in specifics is more apparent as we come down from the limited professional knowledge of the past to the greater of our own time, a belief everywhere, it may be said, in proportion to the ignorance of the people; and, accordingly, with the best informed physicians of to-day, the question is not what drugs shall be prescribed, but shall there be any treatment beyond rest and an appropriate regimen; and if his knowledge tells him that these last are sufficient for the case in hand, the physician courageously withholds all medication; and now, when some ill-informed person flings back that ugly word scepticism to indicate his estimate of what, with a show of learning, he will probably style, in the well-worn phrase of Asclepiades, 'a meditation upon death,' the reply is ready—that a knowledge which can dictate such a management of a case has in it not a single element of doubt, and is, therefore, as far as possible removed from scepticism. It is vastly more positive and more serviceable than mere faith in the efficacy of drugs without knowledge, 'which, in medicine,' says Sir William Jenner, 'is the worst form of scepticism, inasmuch as it is doubt of truth and belief in error—doubt which may prevent the saving of life, and belief which, embodied in practice, may kill.'"

Progress in Medicine.

REPORT ON OTOLOGY.

By J. ORNE GREEN, M.D.

[Concluded from p. 352.]

PATHOLOGY AND THERAPEUTICS CONTINUED.

POLITZER.—Ueber Traumatische Trommelfellrupturen mit besonderer Rücksicht auf die forensische Praxis. Wiener Med. Wochenschr. 1872.

BLAKE.—Perception of high musical Notes. Transactions of Amer. Otological Society. 1872.

GRUBER.—Zur Entfernung fremder Körper. Allg. Wiener Med. Zeitung. 1872.

JACOBY.—Behandlungsergebnisse bei complicirten Otorrhöen. Archiv f. Ohrenheilk., vol. vi.

SCHULTZE.—Ein Beitrag zur Technik des Nasen-douche. Idem.

LUCÆ.—Ueber locale Anwendung des Chloral Hydrats. Berliner Klin. Wochenschr. 1872.

WEBER.—Krankheiten der Muskeln. Berliner Klin. Wochenschr., No. 32, 1872.

BÖTTCHER.—Veränderungen der Netzhaut und des Labyrinthes bei Fibro-sarcoma des Nerv. Acust. Archiv f. Oph. and Otol.

BÖKE.—Caries des Felsenbeines. Archiv f. Ohrenheilk., 1872.

VOLKMAN.—Caries des Processus Mastoideus. Habilitations-schrift von Dr. Schele. Halle. 1872.

POLITZER gives the results of his experience in accidental ruptures of the membrana tympani, more especially in those caused by a blow on the ear, calling attention to the importance of these cases in medico-legal medicine and the little that is said on the subject in forensic works. The early examination of the membrane is of the greatest importance, as the appearance of the opening is so characteristic that it can be determined from that alone whether the opening is the result of injury or of disease. Ruptures from injury have been generally described as a simple tearing of the membrane on the posterior segment, parallel with the manubrium, the edges lying in contact and only separating when air was forced through. Politzer, however, considers that such a condition is the exception, for in most of his cases there was a wide opening, owing to the retraction of the fibres. The position of the rupture was more frequent on the posterior and lower than on the anterior half of the membrane, and usually midway between the hammer and tendinous ring; its form, either round or oval. The remainder of the membrane, with the exception of a slight congestion along the hammer, is normal. The resulting deafness is variable; most marked when the labyrinth has also suffered from the concussion.

Where the membrane alone has suffered, the deafness is slight, the watch and voice are heard fairly, the tuning-fork on the head is heard only in the injured ear and subjective noises are wanting. It sometimes happens that the force of the blow is expended on the labyrinth without injuring the membrana tympani, and in these cases, which are much more unfavorable, there is a great degree of deafness, violent

subjective noises, and the tuning-fork is heard in the uninjured ear. Occasionally, rupture of the membrane is combined with concussion of the labyrinth.

One characteristic of a rupture from injury, as distinguished from one from disease, is the perforation whistle when air is blown through. In a traumatic rupture, the air passes through with a broad, deep sound, but in a pathological perforation with a sharp whistling; the force necessary to produce the sound is also much less in the former than in the latter case. The course of the injury, where the labyrinth is unaffected, is generally favorable, the opening closing without marked inflammatory reaction, as Politzer says, generally by a growth from the inner layer of the membrane first. Some days after the injury, a greyish-yellow membrane is seen to be "pushed over" the rupture from the inside, and, after this membrane has entirely closed the opening, the torn edges of the cutis can still be seen for several weeks. A suppurative inflammation of the membrana tympani or middle ear is occasionally seen after a traumatic rupture, but is, according to Politzer, usually the result of an irritating treatment, such as instillations. The restoration in these cases is often perfect, but occasionally the inflammation becomes chronic, and a permanent opening, with greater or less deafness, remains.

In the majority of ruptured membranes, the functions of the ear are completely restored. Where changes have taken place in the middle ear as the result of suppuration, or where the labyrinth has suffered from severe concussion, deafness of variable degree may remain. In concussion of the labyrinth, the hearing may be restored, even after weeks, but more frequently some disturbances of the ear remain for life.

The treatment of these ruptures is simple: local applications and syringing are to be avoided; the exposed mucous membrane of the tympanum should be protected by excluding the air. In concussion of the labyrinth, Politzer claims to have improved the hearing by the constant electric current.

In a legal point of view, it is all important that an examination of the affected ear should take place within a few days of the injury, for after that time, as cicatrization may have taken place, it may be impossible to say whether rupture had existed or whether any existing deafness is due to the injury. A suppurative inflammation from an injury cannot be distinguished from a primary suppuration.

The degree of injury to the ear may be regarded as slight when the labyrinth has escaped concussion and when the rupture heals so that the hearing is perfectly restored; as severe when the labyrinth has suffered, and when, after cicatrization has taken place, repeated examinations during several months still show some disturbance of function. The injury may also be called severe when suppuration has supervened and permanent changes in the middle ear, such as adhesions, have resulted therefrom. An observation of, at least, three months, may, in some cases, be necessary before testimony could be given in regard to the permanency of pathological changes, as the ear may require that time to recover from a concussion of the labyrinth.

Concussion of the labyrinth without injury to the membrana tympani gives no objective appearances, and it is impossible, from the examination, to decide whether an injury is the cause of the existing disease in the ear.

The investigations of Blake are of interest, both from a physiological and pathological point of view. They were undertaken with a series of König's steel rods, and carefully carried out. From them it would seem that the perception of high musical notes depends on the conducting rather than the perceptive apparatus of the ear, and varies, diminishing with increasing age or with thickening of the mucous membrane of the tympanum, but increasing with increased tension of the membrana tympani. In perforations of the membrane, the perception for high notes increased, but varied somewhat according to the size and seat of the opening, and the tension of the conducting apparatus, being greatest where the perforation was on the posterior part of the membrane and of large size. A number of cases where it was necessary to make an artificial opening in the membranes were used for testing the truth of the observations, with the result of an improved perception for the notes, after the operation, the increase in one case being from 35,000 to 80,000 vibrations. In most cases of chronic catarrhal inflammation of the middle ear, the limit of perception was 35,000 vibrations, but it occasionally reached 40,000 and 50,000; in these latter cases, however, the membrana tympani was much drawn inwards and consequently very tense. Two cases of voluntary contraction of the tensor tympani muscle showed clearly the improved perception from increased tension of the membrane, the hearing for high notes increasing in one case by 5000, in the other by 10,000 vibrations, during the contraction of the muscle.

Gruber was led, from the difficulty which he experienced in removing a bean from the ear, to experiment on the possibility of causing such swollen vegetable substances to shrivel up so that they could be more easily removed. After trying a large number of solutions, the only effectual ones for this purpose were found to be sulphate of zinc (0.2 to 30) and lime water (10 to 30). In the case in which a bean had been impacted and become so swollen that it could not be removed, he was, by means of an instillation of sulphate of zinc, enabled so to reduce its size that removal was very easy.

Jacoby publishes a series of fifteen cases of otorrhœa, treated by means of galvano-caustic, in addition to the four already published by him; all of them were complicated by polypoid granulations, or by polypi, and the results of the treatment were very favorable, although he fails to show that the same results could not have been obtained by other caustics.

For the purpose of more thoroughly cleansing the posterior nares than is possible by the common form of the nasal douche, Schultze uses a metallic tube, resembling an Eustachian catheter, closed at the end and with numerous perforations. This being attached to a common douche, it is possible, by turning the instrument, to shower any part of the cavity desired.

In cases of so-called chronic dry catarrh of the tympanum, in which no marked changes in the curvature of the membrana tympani were visible, Lucæ has used, with good effect, injections of chloral hydrate (1.0 to 30.0). A few drops of the fluid were injected through the catheter every third or fourth day, and in those cases where the treatment was of avail an improvement was noticed after the second or third injection. The action of the medicine is that of an irritant, and the reaction from the injection may be quite severe, but is of short duration.

In eleven per cent. of his cases, there was a very marked improvement of the hearing, and in twenty-five per cent. a slight improvement. The results gained by the use of this solution he has found to be more permanent than those obtained by other means.

Weber considers that in many of the hitherto incurable forms of chronic catarrh of the middle ear, the primary trouble is a disease of the muscles of the Eustachian tube and middle ear. The cases are those of gradually progressive deafness, associated frequently, but not necessarily, with a catarrhal inflammation of the naso-pharyngeal mucous membrane; beginning on one side, most frequently on the left, with subjective noises, but without other symptoms, and going on to almost complete loss of hearing. He thinks that, as far as the membrana tympani and chain of ossicles are concerned, it depends chiefly on those muscles which bring the parts in contact with the labyrinth whether we hear well or not, and whether the labyrinth is pressed upon abnormally. It is also well known that the palatine and tubal muscles serve to ventilate the tympanum, and that the tensor tympani muscle is in close relation with the tensor veli palati. If, then, the tubal muscles are diseased, especially the tensor veli, he considers that the tympanic muscle also suffers, and the whole mechanism of the acoustic apparatus is affected.

The disease of the muscles consists in a weakness or complete paralysis, or else in a spasmodic contraction, and may be caused either by general disease, such as chlorosis, anæmia, hysteria, or by local hyperæmia or inflammation set up from the inflammation of the mucous membrane.

The treatment which Weber claims to have used with marked effect, is, first, to remove the inflammation of the naso-pharyngeal mucous membrane, and then to treat the disease of the muscles by electricity. For this purpose he considers it necessary to apply both the constant and the induced current along the course of the muscles. This he does by inserting one electrode directly in the Eustachian tube by means of an elastic rubber catheter, and the other in the pharynx, uvula, side of the neck, or vertebral column. The electric current requires to be used with care, and not applied frequently or strong enough to produce much irritation. One of the first effects is a complete cessation of the noises for a short time, and then for longer and longer intervals. The earlier this treatment is used, the better and quicker is the result.

These views of Weber's on the pathology of this disease are based on a number of dissections published by him in the *Monatschr. f. Ohrenheilk.*, in which the only disease found was a fatty degeneration of the muscles of the tympanum.

In a case of fibro-sarcoma of the brain with consecutive blindness, deafness, perverted taste and other functional disturbances, Böttcher found that the tumor extended to the labyrinth through the porus acusticus internus. The acoustic and facial nerves retained their outward form, but the nerve-sheath was imperfect, being broken irregularly into scales. All the canals of the modiolus, through which the nerves normally pass, were filled with a nucleated connective tissue and a large number of bloodvessels, and around the vessels was much brown pigment enclosed in caudate cells. No signs of any nerve elements could be found in the whole modiolus, and the lamellæ of the

lamina spiralis ossea were filled with a transparent nucleated connective tissue. The inner and outer hair-cells were atrophied, but the other portions of the cochlea remained intact. The nerve fibres of the vestibule could not be found, and there was a marked atrophy of the ganglion geniculi of the facial nerve.

At the Naturforscher-Versammlung, Böke showed a number of interesting and new preparations of caries of the petrous bone. In one, the tympanum and external meatus were converted into one large carious cavity, the roof of the tympanum was largely destroyed, the fossa sigmoidea and incisura mastoidea were perforated, and yet the external lamella of the mastoid process remained intact. The patient had had an otorrhœa for years, and finally died with the symptoms of tuberculosis of the lungs. A paralysis of the facial nerve appeared a few weeks before death. The autopsy revealed an abscess of the middle lobe of the brain on the same side as the ear disease. In a second preparation, the fossa sigmoidea was perforated; other parts were free from caries. The otorrhœa was of two years' duration; brain symptoms showed themselves six days before death, and the autopsy revealed an abscess of the brain, which communicated with the ventricle on the same side as the ear disease. A third preparation showed cicatrices on the membrana tympani and the mastoid cells, filled up with a compact, newly-formed mass of bone, the result of a long-continued otitis media. Several cases were related of otitis media without caries, in which death occurred from abscess of the brain.

The result of Böke's observations is that in long-continued otorrhœa it is impossible to determine with what deep changes we have to deal; in many cases the external ear shows no disease, when the bone and even the brain may be already affected.

In caries of the petrous bone, the symptoms during life are by no means proportional to the anatomical changes found, and a precise method of treatment cannot be given. Böke has found that in most cases astringents and caustics increase the acute symptoms and do not diminish the otorrhœa. He advises merely the removal of the discharge by warm water injections; polypoid growths should be removed with the greatest care, as frequently carious bone lies behind them, which may cause serious trouble. Abscesses over the mastoid should be opened, and if the bone is found softened and carious it should be removed; he does not approve, however, of trephining the healthy bone.

In five cases in which the mastoid process was found to be either distinctly carious or much softened, Volkmann laid bare the bone, and the carious portions were scraped out with a sharp spoon. In from three to ten weeks, cure of the caries resulted in all the cases. In one case, it was necessary to repeat the operation once.

BREATH OF DIABETIC PATIENTS (*Gazette Heb.*, July 19, 1872).—M. Guéneau de Mussy, who for several years has devoted especial attention to the study of diabetes, affirms that the breath of individuals affected with this disease very often emits a characteristic sour odor, not unlike that of alcohol, resembling very closely the breath of confirmed drunkards. In several instances, this odor was so powerful as to give at once a clue to a correct diagnosis. He has observed, moreover, that the intensity of this odor diminishes as the amount of sugar in the urine decreases.

Reports of Medical Societies.

BERKSHIRE DISTRICT MEDICAL SOCIETY. J. F. A. ADAMS, M.D., PITTSFIELD, SECRETARY.

Dr. Paddock, of Pittsfield, reported the following cases:—

Pneumonia after Measles.—The patient was a boy of 14, who sat up on the fifth day after measles, and had a chill in the evening, with pain in the right side, and dyspnoea. When seen by Dr. Paddock, on the following day, the respiration was 50; pain very severe; scarcely any expectoration; dulness and crepitant râle at the right base. On the second day, he began to raise pneumonia sputa very freely. Pulse 140; tongue coated; no appetite, taking only milk punch. As the pain was not relieved by moderate doses of Tully's powder, four grains were given every four hours, for twenty-four hours. The pain ceased; pulse came down to 108; respiration 40; expectoration ceased. He had now crepitant râles in the upper lobe of the right lung, dulness in the lower, and bronchial râles in the left. The opiate produced a long and profound sleep, on awaking from which, he recovered his brightness, and convalescence very rapidly ensued.

Dr. Paddock stated that he has found, in pneumonia with pain, that opiates are beneficial, while in bronchitis, the symptoms are aggravated by them.

This patient also had mustard and flax-seed poultices applied to the chest. The bowels moved daily, notwithstanding the opium.

Railroad Accident; Amputation.—A healthy young man, aged 33, was run over by an engine, Sept. 19th, receiving a compound, comminuted fracture of the left tibia, and simple fracture of the fibula. For two weeks, an attempt was made to save the limb by the surgeon in charge of the case. Gangrene ensued, with typhoid tongue. Pulse 140–150. Under the use of stimulants and large doses of quinine and iron, the strength improved, and pulse was reduced to 120. On the fifteenth day, amputation was performed by Dr. Paddock, in the middle third of the leg. The tissues were found inflamed nearly to the groin, and there was much hæmorrhage from the distended vessels. The medulla of the tibia was highly inflamed. The lower end of the tibia was found, for four inches in extent, to be very finely comminuted. The stump healed in part by first intention; a small portion only of the anterior flap sloughed away, the wound rapidly granulated, and is now entirely healed. The patient was kept constantly on full doses of quinine, iron and stimulants.

Strangulated Femoral Hernia.—A lady, aged 72, has had, for four years, a bunch as large as a small orange, in the right inguinal region. Last month, on lifting a tub of water, she fainted, and, on recovery, found that the tumor had become as large as a teacup. She sent for a homœopathic doctor, who reduced it to the size of a lime. On the third day, she had stercoraceous vomiting and tympanites; her bowels had not moved.

Was first seen by Dr. Paddock on the eighth day, these symptoms having persisted. He proceeded to operate at once. The hernia was found to be femoral, presenting immediately below Poupart's ligament. The sac was firmly adherent to the surrounding tissues, and the hernia

firmly glued to the sac, and to the ring, rendering its return very difficult. The hernia was omental and quite dark. It was returned to the abdominal cavity, and the wound left open. The patient was kept under large doses of morphia for ten days. There was much inflammation, and a foul discharge. The wound was syringed out daily with carbolic acid solution. On the fifteenth day, a large slough, the size of a lemon, evidently omentum, came away, and the patient thence rapidly recovered, and is now, at the eighth week, entirely well, and the wound is healed.

Abscess of Appendix Cæci.—A young man, aged 19, had, two years ago, an attack of severe pain and inflammation in the right groin, and right side of the abdomen. Was sick for several days, and then recovered. He appeared and felt perfectly well, until a year later, when he was attacked with pain in the same region, following a considerable strain in lifting. His mother gave him rhubarb, producing several discharges. On the following day, he was seen by Dr. Paddock. He then had diarrhoea; the bowels were painful, and slightly tympanitic; pulse 80. Opiates were administered. In the evening, the pulse was 100, and diarrhoea continued; expression anxious. The next morning, pulse was 120, bowels hard and tympanitic; the patient, however, was up and about the house, feeling pretty well. That afternoon, Dr. Smith saw the case with Dr. Paddock. The pulse was then 160. The opiates were increased, and hot fomentations applied to the bowels. Two or three hours later, the patient suddenly died, having walked across the room, when he felt faint, returned to his bed and expired.

At the autopsy, the opening from the appendix to the cæcum was found obliterated, the appendix dilated, and a round, ulcerated opening was found in its wall, into the peritoneal cavity. The appendix contained some small seeds and some pus, and pus was found in the adjacent peritoneum, with much lymph.

The opening from the cæcum to the appendix was evidently closed during the first inflammatory attack; and the last attack was due to suppuration and rupture of the occluded appendix.

Diphtheria.—Dr. Wilcox, of Lee, reported that, since the last meeting, he had had several new cases of diphtheria, and three deaths. When the cases are seen early, he finds that the formation of membrane is arrested by the application of a strong solution of persulphate of iron; but when this is done later, it seems rather to do harm. The liq. ferri persulph. is diluted with an equal quantity of water or glycerine, and applied twice a day, at the outset. He uses alcoholic stimulants and quinine, finding the latter to do better than iron. In a case seen at Tyringham, about the time of the last meeting, there was slight exudation on the tonsils, and constitutional symptoms were very slight. The case was not seen again for several days, and then the membrane was found to have extended to the trachea, producing great dyspnoea, and depression was extreme. Inhalations of steam were used. A piece of false membrane, measuring two inches by two and one-half, and one-eighth of an inch thick, was thrown out, with temporary relief, but the patient died in two days. This was one of the oldest patients attacked, being a girl of 13.

Convulsions.—Dr. Reynolds, of Richmond, reported the case of a child, 1 year old, healthy, with a large head. On the first of August, he received a blow on the head, at the base of the skull, by falling

against a bracket. An hour later, convulsions came on, the child became very blue and cold, the eyes rolling and winking constantly, pupils dilated, with strabismus, both external and internal. Hot baths and stimulants were used. The attack lasted five hours. Dr. Paddock was sent for, in consultation, but the patient began to improve before he arrived. A dose of calomel was given. The child speedily recovered. Twelve hours later, there was vomiting, but no other bad symptom. Since then, the child has been perfectly healthy, till two weeks ago, when a bump on the head was received, and convulsions returned, lasting twelve hours. Since then, he has been as well as ever.

Cancer of Ileo-cæcal Valve.—Dr. Smith, of Pittsfield, reported the case of a young woman, attacked two years ago with typhoid fever, which was said to have been very severe in abdominal and brain symptoms. She was sick eight weeks, and remained in poor health until ten months later, when she was seized with severe pain in the right iliac region; bloody diarrhœa came on at the same time, and the pain grew more and more severe, so as to induce screaming. Dr. Smith was then first called. He found a tumor in the right iliac region, as large as his hand, tender, hard, uneven and nodulated. On pressure, a gurgling sound was heard, as of air passing from beneath the hand. The uterus and appendages were found healthy. He supposed the tumor to be connected with the bowels, but could not satisfy himself of its character. The tongue had a typhoid look; urine scanty; pulse 180. From the collections of gas in the intestines above the tumor, he judged that the calibre of the intestine was reduced at that point. No pus was found in the dejections. Anodynes were administered, with tonics and counter-irritants. In two months, the appetite had returned, the pulse was reduced to 80 or 90, pain was diminished, tongue cleaner; had ceased to lose flesh, and the tumor was perceptibly smaller. Keeping the bowels quiet for four or five days did not increase the size of the tumor. The patient remained in this condition for several months, and then passed from under Dr. Smith's care. A month ago, he was again called to her, and found her suffering from peritonitis. A few days before, she had taken some form of vermifuge, administered by a "worm-doctor," which produced diarrhœa and excessive exhaustion, and the peritoneal inflammation speedily supervened. She died in a few days from acute peritonitis.

An autopsy was made on the following day. On opening the abdomen, the cæcum was found enlarged, and containing a hard substance, whose character was difficult to determine until the cæcum was slit open, when a tumor was found, two and one-half inches in length, and one inch and a half in diameter, cylindrical and tapering to a point, the ileum traversing its length, and the ileo-cæcal valve situated at its extremity. This orifice was very small, scarcely larger than the director which was passed through it, and deep ulceration surrounded it. The tumor was as hard as scirrhous, nodulated, and much ulcerated. At its apex, near the valve, was a horn-like projection, three-fourths of an inch in length, hard like the body of the tumor. Externally, the ileum was found to be intussuscepted into the cæcum, and held in its new position by strong adhesions. The tumor, on section, showed a firm, greyish structure, containing cavities filled with pus. Under the microscope, abundant fusiform cancer-cells appeared, with pus-corpuscles. The specimen was exhibited.

Dr. Miller, of Sheffield, described a peculiar attack, from which he has just recovered. About four months ago, he was seized with pain in the right chest, two inches from the sternum, below the fifth costal cartilage. This was accompanied with a dry, hacking cough, without sputa. He felt listless, with no desire to move about, lost twenty pounds of flesh, was unable to lie on the right side without great increase of pain.

He had frequent attacks of vertigo. The pain continued to increase, until a week ago, when he had an attack of coughing, felt a sense of giving way at the seat of pain, and coughed up a hard substance, which he did not examine minutely, but observed that it was of dumb-bell shape, of the size of a crow-quill at the constricted part, an inch in length. The centre was bluish in color, the ends of a lighter hue. Within an hour, he felt complete relief from pain, and could straighten himself up for the first time in four months. He at once regained his appetite, and began to improve in all respects. The cough disappeared, and he now feels perfectly well, and begins to gain flesh.

Dr. Smith, of Pittsfield, remarked that this was doubtless a case of foreign body in one of the bronchi, and narrated a similar case in his own practice, the patient having got a beard of wheat into one of the bronchi, producing all the usual symptoms of phthisis, which disease he was supposed to have. After some months, he coughed up the beard, surrounded with mucus, and recovered at once.

Dr. Miller said that it was possible he had inhaled some foreign body in harvesting; but he was never aware of doing so.

Dr. Mercer, of Pittsfield, reported the case of a little girl, 2 years old, who, in March last, swallowed a silver quarter of a dollar. All efforts to induce it to pass by the bowels were unavailing. She has since suffered from wheezing respiration. On Nov. 18th, she coughed, vomited, and threw up the coin, much blackened, which had lain for eight months, either in the stomach or œsophagus, probably the latter.

DR. STIFF (*Correspondenz-Blatt der deut. Gesell. f. Psychi. u. gerichtl. Psychol.*, 1872, 11 and 12) mentions a species of optical illusion, of which he was the subject during an attack of scarlatina. He saw hunts, numberless wild beasts followed by as numberless packs of hounds; behind these, innumerable huntsmen; soon again, great masses of troops falling upon one another; at another time processions, herds of slaves, masses of people, &c. Most remarkable, however, was the mode in which these masses were grouped and moved. They arose from two sides and approached, or rather two columns advanced from the same side to meet in the middle, where was an undistinguishable confusion. These phenomena were visible with the eyes shut, and in a dark room. In the light they disappeared. The fashion of the appearance corresponded so exactly to the course of the large vessels of the retina, that he concluded it must be owing to the blood flowing through the veins, and that the sight of the various figures was dependent upon the impression made by the blood corpuscles moving through the veins to the papilla, where was the confusion of all forms. He questions whether the phenomena seen during delirium tremens may not sometimes be of this nature.

Bibliographical Notices.

The Science and Art of Surgery. By JOHN ERIC ERICHSEN. A new Edition, enlarged and carefully revised by the Author. 2 vols. Philadelphia: Henry C. Lea. 1873.

In his preface to this new American edition, which, we understand, is a re-print from the sixth English edition, Mr. Erichsen expresses himself much gratified by the way in which his work has been received in this country. We are happy to be able to add our testimony to that of others as to the position which the book still continues to occupy in surgical literature, in spite of the great increase in the number of surgical text-books the last few years. One cannot, properly speaking, call it a text book, being more suitable as a work of reference to the practitioner rather than a book to be placed in the hands of the medical student. The English surgeons are preëminently a practical class of men; this, perhaps, may in a measure explain the popularity of English surgical works. The present work is by no means an exception to this rule. The illustrations, for instance, are, as they should be, very numerous, and, although they cannot all be said to possess equal merit, are nevertheless, well adapted to serve the purpose for which they were intended. There is one criticism, however, which we think can be made with regard to this point, which is true not only of this but of most works on surgery, and that is that writers are only too apt to select exaggerated forms of disease for the purposes of illustration. We are all familiar from our medical boyhood with the *noli me tangere* of Drutt, and like horrors, but how many of us have seen such specimens of the ravages of disease. A glance at the chapters on tumors and scrofulous inflammations has suggested this criticism. We cannot help feeling that this is a relic of the olden time, when medical books were intended not only to instruct the profession, but to impress the laity. We find the division on operative surgery occupying the most conspicuous part of the work under the title of "First Principles." Apart from the appropriateness of such a title, the propriety of which we very much question, we should prefer to see the chapters on amputations and excisions at the end rather than at the beginning of a properly arranged work on surgery. The arrangement of many subjects is equally faulty, and in another edition the department on the eye might well be left out entirely. A little knowledge is a dangerous thing, and we hope to see specialties like this and the ear, for instance, left to those who thoroughly understand them. We are happy to record an improvement in the paragraphs headed *treatment*; the old school plan, which one so frequently runs through in despair in hopes of finding some good suggestion, has practically been abandoned, and a more rational system of treatment has been substituted. "The books," in this respect, need thorough overhauling, and, more than all, those on surgery. The readiness with which the reader amuses himself with attractive descriptions of surgical operations and skips treatment, may, perhaps, account for the many poor physicians the ranks of surgery contain. We have pointed out some of the faults of this book; it would be a much longer task to enumerate the many points of excellence which it contains. In-

deed, its record speaks for itself, and it hardly needs our testimony to the fact that it still occupies the front rank in surgical literature.

Handbook of Physiology. By WILLIAM SENHOUSE KIRKES, M.D. Edited by W. MORRANT BAKER, F.R.C.S. Eighth Edition. London: John Murray. 1872. Pp. 835, small 8vo.

THIS volume might well be used to replace many of the physiological text books in use in this country. It represents, more accurately than the works of Dalton or Flint, the present state of our knowledge of most physiological questions, while it is much less bulky and far more readable than the larger text books of Carpenter or Marshall. As a book of reference, however, it cannot take the place of these last mentioned works. The style is generally clear, and the expressions well chosen. The description of the arterial pulse is, however, an exception to this statement. Here the author, while recognizing the difference between the rapidity of the pulse wave and that of the stream of blood, seems to adopt a theory which is only comprehensible on the supposition that the two rates are identical.

The account given of the production of heat in the animal body is not so full as could be desired. We look in vain for any mention of the views of Helmholtz or Heidenhain on the part played by the muscular system in the performance of this important function.

In the chapter on the physiology of vision, it is rather surprising to find the author gravely discussing the old question why we do not see objects inverted. If some physiologist would explain why we *should* see objects inverted, it would greatly contribute to the elucidation of the problem.

These, however, are matters of minor importance. In general, the work seems to be very well done, and the book is admirably adapted to be placed in the hands of students. B.

Lessons in Elementary Anatomy. By ST. GEORGE MIVART, F.R.S., &c., Lecturer on Comparative Anatomy at St. Mary's Hospital. London: Macmillan & Co. 1873. Pp. 535.

THIS book is particularly welcome as an attempt to present anatomy in a new manner. The author declares, in the preface, that the book has no pretensions to be a comparative anatomy, but that its purpose is merely to show the most important variations in the structure of the lower animals from that of the human body. Though there is nothing original in the idea, yet we agree with the author in thinking it the first attempt of this special kind which has been published.

Human anatomy is the starting point; and we consider it the proper one for a course on general anatomy to students who are not to grapple with the deepest problems (which can be worked out only in the laboratory), but who are to acquire the general principles of morphology; for, however vague their ideas may be at the start, they have a certain knowledge of their own bodies which they have not of those of the lower animals. A course of this kind is a good preliminary to the special study of human anatomy, as many points acquire a significance by comparison, which, when considered by themselves, they do not possess. Hence, we consider the plan of the book a good one, and pass on to its execution.

After describing any particular portion of the human frame, the author enumerates many striking differences in other forms in a way which is clear enough for each individual case, but which, after a time, leaves the mind rather confused. We think this would be avoided if an outline were given of the ideal plan upon which the part in question is constructed, and then the most marked cases of variation from it, as well as from the human type, were enlarged upon. The introduction of a little physiology to show the advantages gained by certain variations would tend to fix the latter in the mind of the student. The chapter on "the internal skeleton generally considered" is good, but does not atone for the omission first alluded to. At the end, the author gives the peculiarities by which man's place in nature may be determined. He enumerates the points in which man differs from fish, batrachians, reptiles, birds, and certain orders of mammals, respectively, and, finally, from the higher apes.

There is much to praise in the work, though it leaves a good deal to be desired. The task was a very difficult one, and we are grateful to the author for undertaking it. A second edition will, no doubt, be better in many respects, but, as it is, the book supplies a want, and in proper hands will prove a valuable text-book. The illustrations are very numerous, and, as a rule, good in design, but many are poor in execution.

BOOKS AND PAMPHLETS RECEIVED.

The Logic of Medicine. An Address delivered on the occasion of the Twenty-fifth Anniversary of the New York Academy of Medicine, Dec. 30th, 1872. By Edward S. Dunster, M.D. New York: D. Appleton & Co. 1873. Pp. 31.

Third Decennial Catalogue of the Officers and Alumni of the Bellevue Hospital Medical College, 1861-71. New York: D. Appleton & Co. 1873. Pp. 66.

Reports of the Town Officers of the Town of Webster for the year 1872-73. Pp. 80.

Report on the Progress of Ophthalmology. 1872. Prepared for the American Ophthalmological Society. By B. Joy Jeffries, A.M., M.D. Harv. Pp. 60.

The Charter and By-Laws of the New York State Inebriate Asylum. Printed at the "Record" Office. 1873. Pp. 18.

American Association for the Cure of Inebriates. Proceedings of the Third Meeting, held in New York, October 8th, 9th and 10th, 1872. Published by order of the Association. Albany. 1873. Pp. 127.

Fourth Annual Report of the State Board of Health of Massachusetts. January, 1873. Pp. 473.

Report of the New or Fifth Decennial Revision of the United States Pharmacopœia to the Medical Society of the State of New York. By Edward R. Squibb, M.D. New York: D. Appleton & Co. Pp. 25.

Report of the State of the New York Hospital and Bloomingdale Asylum for the year 1872. New York. 1873. Pp. 25.

Abstracts and Intelligence.

RESEARCHES CONCERNING CHOLERA.—The *British Medical Journal*, Feb. 22, 1873, contains an account of the researches which are being made by Messrs. Lewis and Cunningham on the mode of origin and diffusion of cholera. Their *brochure* is divided into three parts, and contains valuable information under the following heads:—1. Microscopic Examination of the blood; 2. Experiments on the Introduction of Organic Fluids into the System; 3. Experiments on the Section of the Splanchnic and Mesenteric Nerves. The present article treats only of their researches comprised under the first of these subdivisions.

Before proceeding to the investigation of the peculiarities and changes to which the blood of patients sick with cholera is subject, the authors made themselves conversant with the changes which are apt to occur in specimens of blood taken from healthy persons, or from such as were suffering from diseases other than cholera, and they were thus enabled to ascertain the distinguishing characteristics of the specimens of cholera-blood. And such characteristics were by no means wanting. The authors describe with much minuteness a series of remarkable changes which were constantly repeated in specimens of cholera-blood, the temperature of the air at the time varying from 76·3° to 98·2° Fahr. The narrow rim of serum at first observable at the circumference of the drop of blood, which had been placed on the glass under the microscope, ultimately widened into a clear area of fluid, whilst the minute clot contracted. The number of white corpuscles at first visible was small and not very notable, but with the widening of the ring of serum a series of very remarkable phenomena gradually occurred, beginning an hour after the blood had been drawn. These changes are thus described:—"Normal-sized white corpuscles began to migrate into the fluid, but, in addition to these, and in far greater numbers and activity, were much larger and more delicate bioplastic bodies; cells they were not, for they had not at this time the faintest differentiation of wall, contents or nucleus. They were simply masses of fluid bioplasm—bioplasm so fluid and diluted as to be in many instances almost, if not entirely, undistinguishable by refraction from the surrounding medium. . . . Gradually the consistence of these large bioplastic masses appears to increase, and they, as it were, grow into sight. Their movements are extremely constant and free—no mere alterations of form, but free progression, along with such movements. The alterations in form vary extremely, sometimes consisting of the emission of rounded and lobulated protrusions, and at others of the running out of elongated, slender extensions and threads." Similar bodies may at the same time be seen in the serous spaces of the clot. After a time they begin to divide, and give rise to a second generation of bioplasts, smaller, though scarcely less active. But at the close of twenty-four hours from the beginning of the examination, only a few remain mobile; the majority have considerably increased in size, whilst they have also become denser in substance and more full of granules. At this stage they are more or less spherical, and not unlike pus-corpuscles. During all this time the serum remains clear and free from all traces of bacteria.

The authors do not wish it to be inferred that there is anything distinctly specific in the above-mentioned changes occurring in cholera-blood, but they think the blood in this disease is much more prone to exhibit such changes to a well-marked extent. Similar amœboid corpuscles were detected creeping out of the clot, even in most of the specimens of healthy blood, but in no single case in anything like the same proportion as in the blood obtained from persons suffering from cholera.

These observations seem to afford an explanation as to the nature of the bioplastic cells which are abundant in, and characteristic of, évacuations passed during the course of cholera. There can be little doubt that cholera évacuations are very frequently contaminated with escaped blood, and we may infer that such changes as have been described may occur as rapidly when blood is effused upon the inner surface of the intestines. Such bioplasts "in their early stages will correspond with the freely mobile amœbæ of the évacuations; when rather older, they lose their freedom of motion, and show more feeble changes of form, ultimately becoming motionless and pus-like, or, rather, exudation-like cells, such as are observed in the flakes of lymph in peritonitic and similar effusions, and such cells we know to form the great bulk of those present in perfectly recent choleraic dejections."

Other important facts bearing upon the "germ theory" in its application to cholera have been made known by these investigations. Not the faintest trace of bacteria was detected in any instance in the specimens of blood submitted to immediate investigation, and, as a rule, such organisms were similarly absent from the specimens submitted to continued observation. "The idea that bacteria are normally present in the blood of cholera may be finally dismissed." With regard to the presence of fungus-germs as a characteristic of the disease, the authors write, "There is absolutely nothing in favor of any such view."

With regard to the presence of sarcinæ in the blood, the authors cannot reconcile their observations with the statements of Losterfer and others as to their constant occurrence in this fluid. On only two occasions did they observe them, and they incline to the opinion that they are crystalline rather than organized bodies.

These observations on the blood in cholera, taken in conjunction with those previously recorded concerning the dejections, "do not tend to indicate the presence of a microscopically demonstrable morbid poison in either medium;" the present researches tend to throw considerable light on those published about two years ago, since they show that "the escape of materials from the blood is sufficient to account for the presence of the most remarkable and constant microscopic features in the évacuations."

BERIBERI IN BRAZIL.—Dr. J. F. Da Silva Lima has written on the above curious disease, a very entertaining abstract and review of which appears in the March number of the *Edinburgh Medical Journal*. The affection is divided into three types or varieties—the paralytic, the œdematous and the mixed.

In the first, or paralytic form, the disease first manifests itself by a vague feeling of languor and discomfort, of weakness, and disrelish for

all exertion. This is followed by a tenderness in the extremities, especially the inferior, generally regarded by the patient as muscular rheumatism; along with this, there is numbness or diminution of the cutaneous sensibility. Weakness in the extremities now ensues, and the patient's legs give way under him, so that he is obliged to take to bed, where he lies on his back, able to bend his knees or move his legs only with painful effort. Similar symptoms next supervene in the upper extremities, accompanied by loss of tactile and muscular power. There is much pain on pressure over the paralyzed muscles. Another characteristic symptom now appears, viz., the feeling of a cord drawn tightly around the lower part of the abdomen, gradually widening and rising till it reaches the level of the axilla, giving the sensation of the abdomen and chest being encased in boards. As soon as this feeling of constriction reaches the thorax, dyspnoea begins to appear, which increases as the tightness extends upwards. Some slight puffiness frequently makes its appearance in the face and lower extremities. The former, as well as the upper part of the trunk become of a palish blue color. The dyspnoea gets worse; convulsive movements are frequent in the hands and arms, more rarely in the legs, and death ensues by asphyxia.

The second variety appears to be ushered in by a hard, tense and elastic oedema of the legs, which soon spreads to the trunk, face and arms, doubling almost at times the bulk of the body. The dyspnoea is great, and constantly increasing, while the internal organs, particularly the lungs and liver, become congested, and death takes place either from asphyxia or from congestion of some of the important viscera.

In the third, or mixed, variety of the disease, the predominant symptoms above noticed are pretty evenly balanced. The rate of mortality is said to be, at least, 50 per cent. If the patient recovers, there is great danger of a relapse, if he remain within the tropics, and the only hope of safety lies, therefore, in leaving the country. The most efficacious mode of treatment consists in leaving the tropics as soon as the first symptoms show themselves, and the patient is very often quite well by the time he reaches Europe.

Sea-bathing, continued for many months, is the only other mode of treatment which exerts any curative influence upon the disease.

ROBUR.—The introduction to public favor of a new alcoholic beverage, recommended on excellent authority for general use, is a matter of some importance. Robur was announced as a new tea-spirit. We have been asked to form a judgment of it; and, as dietetic qualities of an unique character have been claimed for it, and it is rising into popularity, we have thought it right to subject it to critical examination. Full opportunities have been afforded for investigating analytically its properties at its place of manufacture; and to these we have, of course, added the examination of samples purchased of retail agents who supply the public. Medical men are likely to be questioned as to the character of this new form of alcohol; and the materials for an opinion are of two kinds, theoretical and practical. Theoretically, the combination of theine and tannin with alcohol has much to recommend it. Theine and alcohol both belong to the class happily defined by M. Angel Marvaud, in his recent treatise, as economizers of force—

"aliments d'épargne;" and otherwise as aliments preventive of waste—"aliments deperditeurs." In the discriminative use of alcohol, and in the right use of tea as a beverage, this function must always be considered as of prime importance. It is to this, even more, perhaps, than to its stimulating properties, that a large part of the value of alcohol in fevers and in exhaustive diseases must be held to be due. The universal instinct of mankind has selected the plants which furnish theine or its analogues, caffeine and theobromine—tea, coffee and maté—in virtue of similar properties. That alcohol gives wings to tea, every one who has added a *chasse* to a cup of black coffee as a digestive after dinner, or has "laced" a cup of tea with a liqueur of brandy after exhaustive fatigue, will readily testify. The same principle is involved in the composition of robur. It is a pure spirit, singularly free from fusel-oil, with which most brandy and whiskey are largely contaminated. It is extremely palatable—most so when mixed, like toddy, with hot water, and sweetened. It contains a considerable percentage of theine, with tannin and sugar. It leaves on the palate the pure flavor of tea, and no more wholesome spirit can be found. As a spirit intended for popular use, it has many great merits. It does not tempt to intemperance, for it rather helps than muddles the intelligence; and, if robur were substituted for gin, brandy or whiskey, it would, we think, be a clear gain to the cause of temperance. The digestive properties which Dr. Lankester asserts it to possess are such as have long been attributed to the *chasse café*, which it resembles in character. Medically, it is, we think, likely to be more useful than any of the forms of spirit which are in daily use. On the whole, we consider that no more has been claimed for it than is fairly its due, and that it is a valuable addition to the dietetic list.—*Brit. Med. Jour.*

RESIN OF COPAIBA A DIURETIC.—Dr. Wilks speaks with the greatest confidence of the value of the *resin* of copaiba as a diuretic. It is thought that the oil acts more especially on the mucous membranes, and is therefore useful in affections of the bronchial, vesical and urethral surfaces. If this be so, it is equally certain that the *diuretic properties* reside in the *resin*. Dr. Wilks has found it very difficult for patients to take the ordinary pharmacopœial drug; he therefore has substituted for it the simple resin, and finds it equally or more efficacious. He gives fifteen or twenty grains in mucilage and flavored water three or four times a day, and has had numerous cases showing its marked diuretic properties. There is now in Guy's Hospital a man who came in with ascites, and who, after taking numerous other remedies, was ordered the resin. The amount of urine was at once doubled in quantity, and now, after a few days, the fluid has almost disappeared. Dr. Wilks says he has lately had as a private patient a "drunkard builder," with cirrhosis of liver and enormous ascites, for whom he likewise prescribed the resin; a diuretic action was at once effected, and the dropsy quickly disappeared. In heart cases, also, he has given it with great success. Dr. Wilks states that he has often given the remedy and failed; but, on the other hand, when it has succeeded, the result has been more striking than that arising from any other diuretic he has seen. He would wish it were placed in the Pharmacopœia, as it is not kept by chemists.—*Lancet*, March 22, 1873, p. 410.

Medical Miscellany.

THE conjoined twins, Millie and Christine, are now known as the two-headed nightingale.

NOT AMERICAN THIS TIME!—"It has just come to light," says the *Lancet* of March 22d, 1873, "that during the last few years a large trade has been going on in forged diplomas purporting to be from the *German University of Marburg*, no less than forty persons in this country having purchased the worthless documents."

THE *Practitioner* will appear in May in an enlarged shape, with sixteen additional pages devoted entirely to hygienic questions. The support of distinguished authorities is promised.

THE *Canada Lancet* ascribes certain propositions concerning smallpox and vaccination, which first saw the light in the editorial department of this JOURNAL on Jan. 16th, 1873, to "a writer in the *Medical and Surgical Reporter*."

DR. BROWN-SEQUARD delivered the second part of his lecture on *The Origin and Signification of the Symptoms of Brain Disease* in the lecture-room of the Boston Society of Natural History on Saturday evening. The first part of this valuable lecture was delivered here on Oct. 5th, 1872, and appeared in the JOURNAL of Oct. 17th. We hope very shortly to present the second part to our readers.

A MAGNIFICENT present of Peruvian skulls has lately been received by the Anthropological Institute (London), from Consul Hutchinson, of Callao. This highly instructive series consists of 150 specimens, dug out, not gathered from the surface, of the old original burying grounds of Paramayo and of Ancon, twenty and thirty miles north, and from Corso del Oro, about one hundred miles south of Callao. Twenty-four of these were taken by the Consul himself from the Huacas of Ancon, and were probably those of Chin-chas, and, perhaps, Ayonaras.—*Nature*, March 6th, 1873.

TONER LECTURES.—The first lecture of this course, on "The Structure of Cancerous Tumors, and the manner in which adjacent parts are invaded," was delivered by Dr. J. J. Woodward, U.S.A., at Washington, March 28th. The images of some seventy photographs of specimens were thrown on a screen by the calcium light. The lecture was very well attended, and appears to have been most successful. The next will be by Dr. Brown-Sequard, on April 18th.

THE *Homœopathic Review* says:—

"The obligations of the homœopathic practitioner to his patients to relieve pain and to stave off death are higher than his duty to practise homœopathy. If he cannot, whether from the incompleteness of science, or from his own imperfect acquaintance with it, prescribe homœopathically, he must use such measures as, within his knowledge, are most likely to achieve the end he has in view. He is the most successful physician who, within the limits where a homœopathically acting medicine can effect good, can relieve and cure, *most seldom* falls back upon an allopathic palliative."

THE ART OF PRESCRIPTION WRITING has some curious illustrations. The following was composed by a Fellow of a State Medical Society, not a thousand miles from Massachusetts:

"Ext. application

R. Aq Aurenti Fol ʒ vi

Hydr—Crosive gr i

Glycine ʒiii

Sig Applyey night."

PULSE OF VARIOUS ANIMALS.—Vatel, in his *Veterinary Pathology*, gives for our domestic animals the following pulse:—Horse, from 32 to 38 pulsations per minute; ox or cow, 25 to 42; ass, 48 to 54; sheep, 70 to 79; dog, 90 to 100; cats, 110 to 120; rabbit, 120; guinea pig, 140; duck, 135; hen, 140.

ARSENIC IN CONSTIPATION.—Dr. Isnard employs arsenic in small doses for the relief of constipation. He affirms that this agent stimulates the appetite, and that by exciting the peristaltic motions of the intestine, and augmenting the intestinal secretions, it permits the digestion of the ordinary articles of food.—*Lyon Medical*.

ANATOMICAL MODELS.—Three men connected with the place called "Dr. Kahn's Museum," in London, were summoned recently for exhibiting certain indecent and demoralizing representations for the purpose of gain. There was a second summons calling on them to show cause why the models seized by the police should not be destroyed. Mr. Besley (instructed by Mr. Collette, on behalf of the Society for the Suppression of Vice) appeared for the prosecution. Mr. George Lewis, Jun., who appeared for the defendants, said it was their wish that the magistrate should not pass judgment on this case, but that facilities should be at once given for sending it before a higher tribunal, and getting the question finally decided whether models which had been publicly exhibited for twenty-five years really formed the subject of a criminal offence. Mr. Knox said he should commit the defendants to the Central Criminal Court, and send the models to Newgate for the inspection of the judges. Bail was accepted.—*British Medical Journal*.

NOTES AND QUERIES.

A NEW REMEDY.—"The larger amount of the mortality of scarlet fever might be avoided by the processes of disinfection, separation, and a religious adherence to truth," says the astute author of "The Romance of Medicine." Has he tried it? We judge not by his writings.

CREDAT "INQUIRER."—M. Revillod, of Geneva, cautions against the use of collodion with a view to the abortion of smallpox pustules; as it causes pain and strangulation of the skin, does not prevent suppuration, &c. His nostrum is soap ten parts, glycerine four parts, mercurial ointment twenty parts. This, he says (*Gaz. Med.*, March 8), will prevent scarring—if used early enough! PREVALEBIT.

No Doubt.

MORTALITY IN MASSACHUSETTS.—Deaths in seventeen Cities and Towns for the week ending March 29, 1873.

Boston, 146—Charleston, 15—Worcester, 18—Lowell, 27—Milford, 3—Chelsea, 8—Cambridge, 17—Salem, 9—Lawrence, 13—Springfield, 6—Lynn, 23—Gloucester, 8—Fitchburg, 4—Newburyport, 4—Somerville, 6—Fall River, 15—Holyoke, 8. Total, 329.

Prevalent Diseases.—Consumption, 72—pneumonia, 29—cerebro-spinal disease, 25—scarlet fever, 9.

Deaths from smallpox occurred as follows:—Four in Boston, one in Charlestown, one in Lawrence, one in Gloucester, and one in Holyoke. Deaths from cerebro-spinal disease occurred as follows:—Sixteen in Boston, five in Charlestown, and four in Lynn. During the four preceding weeks thirty deaths from cerebro-spinal disease have occurred in Boston.

GEORGE DERBY, M.D.

Secretary of the State Board of Health.

DEATHS IN BOSTON for the week ending Saturday, April 5th, 140. Males, 68; females, 72. Accident, 5—abscess, 1—apoplexy, 1—asthma, 1—inflammation of the bowels, 1—disease of the bowels, 1—bronchitis, 4—inflammation of the brain, 4—congestion of the brain, 2—disease of the brain, 4—cancer, 1—cyanosis, 2—cerebro-spinal meningitis, 14—consumption, 18—convulsions, 2—croup, 3—debility, 3—dropsy, 2—dropsy of the brain, 2—exhaustion, 1—erysipelas, 2—scarlet fever, 10—typhoid fever, 4—gastritis, 1—disease of the heart, 3—hemorrhage, 1—disease of the hip, 1—intemperance, 1—indigestion, 1—disease of the kidneys, 1—disease of the liver, 1—congestion of the lungs, 6—inflammation of the lungs, 7—marasmus, 4—old age, 6—paralysis, 2—puerperal disease, 4—premature birth, 1—purpura, 1—scrofula, 2—smallpox, 2—suicide, 1—teething, 1—tumor, 1—unknown, 4.

Under 5 years of age, 57—between 5 and 20 years, 20—between 20 and 40 years, 33—between 40 and 60 years, 20—over 60 years, 10. Born in the United States, 96—Ireland, 23—other places, 16.